

EXHIBIT 7

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

ASSOCIATION OF AMERICAN
UNIVERSITIES, *et al.*,

Plaintiffs,

v.

DEPARTMENT OF ENERGY, *et al.*,

Defendants.

Case No.

DECLARATION OF IAN A. WAITZ

I, Ian A. Waitz, hereby state under the penalty of perjury that the following statements are true and accurate to the best of my knowledge, and that I could testify to these matters if called to do so:

1. I am the Vice President for Research of Massachusetts Institute of Technology (“MIT” or the “Institute”), a position I have held since May 2024. The matters addressed herein are based on my personal knowledge or upon information I learned in the course of my duties at MIT, including from others involved in MIT’s institutional research, technology transfer, and finance operations.

2. I have been a member of MIT’s faculty since 1991. In addition to serving as Vice President for Research, I am currently the Jerome C. Hunsaker Professor of Aeronautics and Astronautics. I previously served MIT as the department head of Aeronautics and Astronautics, Dean of the School of Engineering, and Vice Chancellor for Undergraduate and Graduate Education.

3. In my role as Vice President for Research, I am MIT’s senior research officer and have overall responsibility for research administration and policy at the Institute. I oversee MIT’s Research Administration Services and Research Compliance units. I also oversee more than a dozen interdisciplinary research laboratories and centers at MIT, including the Nuclear Reactor Laboratory,

the Plasma Science and Fusion Center, the MIT Energy Initiative, and the Materials Research Laboratory. I report directly to the President of MIT.

4. Research conducted at MIT contributes to innovation in areas critical to economic competitiveness, national security, and the quality of life enjoyed by all Americans. Some of MIT's main areas of research focus include energy, advanced manufacturing, biotech, artificial intelligence, health, cybersecurity, and quantum computing. In recent years, MIT has typically spent as much from its own resources on research as it has received from external sponsors. For example, in Fiscal Year 2024, MIT conducted approximately \$800 million of research sponsored by government, industry, and foundations on its campus. Approximately \$480 million of this research was sponsored by the federal government. MIT itself spent roughly an additional \$800 million on research from its own resources, including its endowment. This internal investment in research by MIT benefits and complements much of the federally-funded sponsored research on campus, and also decreases the cost of this research to the federal government.

5. MIT's research translates into critical and novel inventions. For ten consecutive years, MIT has produced more patents than any other campus in the nation. In 2024, 323 utility patents were issued to MIT by the U.S. Patent and Trademark Office. MIT holds approximately 4,000 active U.S. patents. To date, MIT has employed or educated 104 Nobel Prize laureates.

6. MIT's research also translates into innovation that helps drive the U.S. economy. A 2015 study¹ identified more than 30,000 active companies founded by MIT alumni, employing 4.6 million people and generating annual global revenues of \$1.9 trillion. That study's authors noted that these figures were "roughly equivalent to the GDP of the world's 10th largest economy as of 2014."

¹¹ "Entrepreneurship and Innovation at MIT: Continuing Global Growth and Impact," MIT (Dec. 2015), <https://entrepreneurship.mit.edu/wp-content/uploads/MIT-Entrepreneurship-Innovation-Impact-Report-2015.pdf>.

7. The Department of Energy (“DOE”) has funded MIT research in many areas that have produced groundbreaking innovations that helped lead to the creation of a vibrant, private U.S. fusion industry, which demonstrates how consistent federal investment directly fuels American economic growth, global technological leadership, and enhances our national security—assuring a safer, cleaner, and more prosperous future for the United States. One particularly impactful MIT energy-related spin-out arose from MIT’s Plasma Science and Fusion Center (“PSFC”) in 2018. For decades, the Department of Energy’s stable support for MIT’s Alcator C-Mod tokamak (a reactor device that magnetically confines plasma) enabled groundbreaking advancements in fusion plasma research, diagnostics, and integrated modeling. These scientific discoveries and technological innovations ultimately led MIT researchers to help found Commonwealth Fusion Systems (“CFS”) and license from MIT the patents and other intellectual property related to these breakthroughs in the development of fusion energy. CFS has already developed the world’s strongest high-temperature superconducting magnet² and recently announced that it is building the world’s first commercial fusion power plant in Virginia.³ Fusion has the potential to create an inexhaustible, carbon-free source of energy.

8. Many other start-ups and companies have licensed intellectual property owned by MIT that arose from support by DOE. These include technology focused on electrolyte materials for advanced batteries; technology directed to energy storage materials and systems; technology for energy efficient, wireless power charging, including for electric vehicles; and technology for a sulfide chemical process for decarbonizing metal production.

² “Commonwealth Fusion Systems creates viable path to commercial fusion power with world’s strongest magnet”, CFS (Sep. 8, 2021), <https://cfs.energy/news-and-media/cfs-commercial-fusion-power-with-hts-magnet>.

³ “Commonwealth Fusion Systems to Build World’s First Commercial Fusion Power Plant in Virginia,” CFS (Dec. 17, 2024), <https://cfs.energy/news-and-media/commonwealth-fusion-systems-to-build-worlds-first-commercial-fusion-power-plant-in-virginia>.

9. MIT received \$93 million from the DOE in Fiscal Year 2024 (July 1, 2023 – June 30, 2024) for performing sponsored research. MIT conducts research under 286 direct and indirect funding awards from DOE that are currently active for Fiscal Year 2025. This includes 132 grants, 86 contracts, 63 cooperative agreements, and 5 fellowships. These awards involve 176 unique principal investigators at MIT.

10. Each year, MIT negotiates Facilities and Administrative (“F&A”) cost reimbursement rates with the Office of Naval Research (“ONR”), its cognizant federal agency for such purpose. The on-campus F&A rate for MIT’s Fiscal Year 2025 (July 1, 2024 – June 30, 2025) applicable to Department of Energy sponsored awards, as negotiated with ONR in accordance with and under the authority set forth in 2 CFR Part 200, is 59.0%.

11. If DOE were to reduce the F&A rate on its grants and cooperative agreements to 15.0%, then MIT forecasts it will lose approximately \$15 million to \$16 million in reimbursement for costs that support DOE research over the next 12 months alone, assuming that MIT performs a similar level of research activity on DOE grants and cooperative agreements as it did in Fiscal Year 2024. The forecast for DOE-funded grants only, separate from cooperative agreements, is approximately \$10 million to \$11 million. If all federal agencies were to cap F&A reimbursements at 15.0% (for grants, cooperative agreements and contracts), MIT forecasts it will lose approximately \$110 million over the next 12 months in reimbursements for costs that support that research enterprise.

12. MIT currently has approximately \$347 million in active DOE grant awards, against which MIT has spent approximately \$131 million through March 31, 2025. To the extent that DOE were to terminate all grant awards to MIT, then MIT would lose an estimated \$216 million in unexpended grant funds over the remaining lifetime of those awards.

13. MIT forecasts direct sponsored research activity in its annual operating budget, and it budgets the associated F&A cost reimbursement to pay for maintaining the buildings in which the

research occurs and supporting the infrastructure and business functions necessary to conduct the research. Examples of the costs supported by F&A reimbursement include the costs of building, maintaining, operating and renewing research buildings, laboratories and equipment; hazardous materials management; data storage; radiation safety; insurance; administrative systems and services; and compliance with federal, state, and local regulations.

14. Each principal investigator at MIT conducting research uses the agreed-upon project budget, as awarded by DOE and other federal granting agencies, to develop a financial plan for performing each supported research project, many of which span multiple years. This budget typically includes supporting graduate student researchers, postdoctoral researchers, other research staff, equipment, and other research costs. It is on the basis of these project-level budgets in hundreds of individual labs across MIT's campus that individual principal investigators make commitments to hire graduate students, researchers and staff. Those people then derive their education and their livelihoods from this funding. At MIT, there are 992 individuals who were partially or fully supported by DOE awards during the first three quarters of MIT's current fiscal year (from July 1, 2024 through March 31, 2025), including 91 faculty, 445 graduate students, 56 undergraduate students, 196 postdoctoral researchers, 183 research staff, and 21 other staff.

15. The costs being reimbursed partially through the F&A rate are real costs. The final rate is not speculative, but rather established each year after audit by the federal government of actual costs incurred. These costs still exist and must be covered, even if the F&A reimbursement rate is unilaterally reduced. Approximately two-thirds of F&A costs at MIT are facilities-related, and MIT cannot realistically take immediate action to eliminate utilities, maintenance and other activities required to operate buildings and laboratories that conduct federally funded research.

16. As a direct result of real and threatened federal cost-cutting in fundamental research and potential increased levies on universities, including this attempted reduction in F&A cost

reimbursement rate by DOE and other agencies, MIT is being forced to take immediate and contemporaneous action to reduce its financial exposure. The Institute is implementing operating budget reductions and curtailing its capital investments. At the Institute level, MIT is deferring capital projects, notably including research infrastructure and space renewals, lab equipment installations, ventilation air capacity improvements, and energy efficiency upgrades. MIT has also been forced to implement a hiring freeze across the Institute on almost all staff positions. In addition, MIT mandated internal units to cut their budgets between 5 to 10 percent for this fiscal year. Among the possible ways these budget cuts will be implemented by internal units include: layoffs; limiting or deferring investment in research facilities; and scaling back other investments into the Institute. In light of this reduction in federal support for research funding, MIT has also admitted 22% fewer graduate students to its research doctoral programs for the coming academic year—these students are an engine of MIT’s research activity and the future of U.S. science and innovation.

17. The threatened rate reduction will also have a direct impact on the DOE-funded research being conducted at the Institute. The DOE’s proposal to terminate and reissue existing grants under a 15% indirect cost cap would result in immediate and severe disruption to active research. MIT will face serious challenges in maintaining the laboratories, computing resources, technical teams, and administrative support required for world-leading research. MIT would immediately be forced to consider which projects would need to be canceled or scaled back, with resulting reductions in work force. Inevitably, some projects would be halted midstream; equipment construction timelines would be delayed; and key technical personnel—many with irreplaceable expertise—would be lost. The resulting damage, from disrupted data analysis to fractured collaborations, from reductions in research output to diminished opportunities for early-career scientists, could be irrecoverable, and would significantly undermine U.S. scientific priorities and international leadership. Critically, it would also disrupt the pipeline of students and postdoctoral researchers whose training in these programs equips

them for leadership roles in high-tech industry, national labs, and academia—weakening the nation’s capacity to innovate and undercutting U.S. economic and technological leadership for years to come.

18. The PSFC, described above, is the world’s premier university-based research center dedicated to developing the science and technology of fusion energy—an area of research that is central to America’s energy security, economic prosperity, and technological superiority. Fusion research is extremely broad in scope; success requires solving complex problems in areas ranging from material science to high-temperature superconducting magnets, high-power radio-frequency wave generation, nonlinear plasma physics, and state-of-the-art computational simulation, among others. Advances in these areas directly and indirectly benefit many other fields of science and technology. For example, promising new drilling techniques for geothermal energy stem directly from advances in radio-frequency wave generation; and quantum computing algorithms to accelerate fusion plasma simulation are just as useful to the financial industry. The PSFC’s efforts would be severely disrupted, causing detrimental impacts to innovation.

19. As another example, MIT’s world-renowned Department of Nuclear Science and Engineering (“NSE”) plays a vital role in advancing U.S. interests by driving innovation in clean and reliable energy production, strengthening nuclear security, and supporting national defense initiatives. Through cutting-edge research, workforce development, and collaboration with government and industry, the department contributes to the safe and efficient use of nuclear technologies. NSE is committed to advancing scientific understanding, expanding the frontiers of nuclear knowledge, and reducing uncertainties in reactor design, radiation transport, and nuclear materials behavior. The following describe just a few examples of ongoing NSE projects that rely on DOE funding and would be severely disrupted or stopped altogether by major cuts to DOE research funding:

- a. One project aims to develop a next-generation research reactor, MITR-3, featuring high neutron fluxes and large irradiation volumes. This reactor would

greatly augment the U.S. irradiation capabilities in support of the development of advanced nuclear reactor technologies.

- b. Other projects support the development of state-of-the-art radiation transport computational models and software that can leverage modern computing architectures as well as improved capabilities for fast transient analysis, while also developing novel techniques for evaluating the impact of uncertainties for the safe and efficient operation of nuclear systems.
- c. Another project aims to develop technologies for nuclear security arms control treaty verification. These technologies will help to reduce the risk of nuclear war, deter nuclear terrorism, and thus keep America safe.

20. As a third example, the MIT Laboratory for Nuclear Science (“LNS”) advances fundamental discoveries in nuclear and particle physics—from the quantum structure of matter to the dynamics of the universe—and holds leadership roles in flagship projects funded by the DOE. This includes leadership roles at DOE National Laboratories and international projects, as well as leading the Alpha Magnetic Spectrometer mission upgrade aboard the International Space Station, which is central to U.S. scientific leadership at the ISS and in space-based fundamental research. LNS also conducts world-class theoretical research in the field of quantum technology and AI research, which plays a critical role in guiding experimental discovery and advancing the understanding of the physical universe. LNS faculty, researchers, and students are embedded in leading the day-to-day operations of DOE-supported physics experiments at National Laboratories across the U.S. and internationally. These include Jefferson Lab’s CEBAF accelerator, Brookhaven’s RHIC collider, Fermilab’s neutrino program, the Facility for Rare Isotope Beams (FRIB) at Michigan State, Los Alamos National Laboratory, the LHC experiments at CERN, and the development of the Electron-Ion Collider (EIC). MIT researchers are recognized as world experts in the design, development, and operation of some

of the most sophisticated experimental apparatus in nuclear and particle physics, and MIT students are trained through direct involvement in these experiments — a form of scientific engagement that cannot be replicated in the classroom.

21. A fourth example is MIT’s Nuclear Reactor Laboratory (“NRL”). The NRL is a unique national resource that plays a key role in irradiation testing of components and instrumentation vital to the development of advanced nuclear fission and fusion reactors, and to maintaining safe and efficient operation of existing reactors. Deployment and operation of these new and existing resources is, in turn, necessary to maintain U.S. energy security, to support AI expansion, and to expand the desirability of U.S. nuclear exports. Some examples of ongoing NRL projects are:

- a. One DOE-funded award is focused on helping companies that are working to develop advanced reactors using molten salt as a coolant. This will permit operation at high temperature but low pressure, resulting in enhanced safety, high efficiency, and the potential to provide industrial process heat and hydrogen as well as electricity. The NRL is constructing a large volume irradiation facility to test and demonstrate materials and technologies to accelerate the licensing and application of these reactors. Ending support of this effort would disrupt not only the current work on molten salt reactors, but future planned work in the new facility in support of fusion reactor development and other advanced reactor concepts.
- b. A second DOE-funded award is focused on developing Accident Tolerant Fuels for existing light water nuclear power reactors and requires specialized testing capabilities that only a few nuclear research and test reactors can provide. The NRL is one such site and is supporting industry efforts to test new reactor fuels that will increase the competitiveness of U.S. reactors by improving safety,

increasing the length of operating cycles, and reducing fuel costs. This work cannot be continued if DOE grants are terminated or funding severely reduced.

22. Over time, the DOE cuts would also degrade MIT's advanced research capacity as a whole, because they would limit the Institute's ability to invest in its core research enterprise at a time when the United States wants its scientific and technology research at its strongest to compete globally. Especially with regard to DOE-funded research, MIT pursues difficult and expensive research pushing the boundaries of scientific knowledge and technology that requires laboratories and infrastructure that is costly to create and to maintain. Many of MIT's facilities exist nowhere else in the world. Much of MIT's energy-related research is carried out on unique equipment maintained by highly trained staff. Indirect costs allow MIT to support a research environment that is the envy of other nations and which continuously delivers groundbreaking results. A reduction in the indirect cost rate would irreparably harm MIT's ability to deliver science and technology essential to U.S. competitiveness and security.

23. Research universities like MIT are critical components of innovation economies in their local geographies. MIT is at the center of Kendall Square in Cambridge, Massachusetts. Kendall Square houses an array of life sciences and energy technology firms, start-ups, industry, and venture capital firms. MIT and Kendall Square are also closely linked to area universities and hospitals, part of a thriving regional ecosystem of discovery, invention, and economic impact which materially contributes to the improvement of economic prosperity, national security, human health and scientific discoveries.

24. MIT employs nearly 14,000 Massachusetts residents, including more than 2,300 Cambridge residents. Spending from students, staff, and faculty support the local economy. Tourism dollars tied to MIT flow to the Cambridge and Massachusetts economies. MIT is also the longtime top taxpayer in the City of Cambridge because the Institute has historically chosen to invest in its home

municipality. 2024 tax payments related to MIT real estate holdings totaled \$96.7 million, which represents 16.8% of the Cambridge tax levy.

25. Relatedly, MIT's federally funded research also includes important research connections with the Commonwealth of Massachusetts. For example, MIT has a subaward to University of Massachusetts – Lowell under a grant from DOE involving research around the processing of radioactive materials used in fission nuclear reactors.

26. A loss of federal funding would significantly constrain MIT's ability to invest in the people and facilities that make up its research enterprise. Over time, this would lead to less investment in Massachusetts; have negative cascading impacts for MIT's research partners in academia, medicine, and industry; and undermine economic growth across both Massachusetts and the country.

27. Research universities like MIT contribute significantly to innovation and the strength of the U.S. economy, and federal research funding is the key to these benefits. According to the DOE itself,⁴ “[o]ver the decades, [the U.S. Department of Energy Office of Science] investments and accomplishments in basic research and enabling research capabilities have provided the foundations for new technologies, businesses, and industries, making significant contributions to our nation's economy, national security, and quality of life.” According to a September 2020 report by Breakthrough Energy,⁵ the “federal government's R&D investment in the energy sector directly contributed 31,500 jobs, \$3.6 billion in labor income, \$5.0 billion in value added, and \$0.9 billion in tax payments to the national economy in 2018. Including direct, indirect, and induced effects, federal

⁴ “Office of Science Funding,” U.S. Department of Energy, <https://www.energy.gov/science/office-science-funding>.

⁵ “Impacts of Federal R&D Investment on the US Economy,” Breakthrough Energy, LLC (Sept. 2020), <https://www.breakthroughenergy.org/wp-content/uploads/2022/10/BEPwCReport09162020.pdf>.

R&D investment in the energy sector supported 112,100 jobs, \$8.9 billion of labor income, \$13.9 billion in value added, and \$2.8 billion in tax payments.”

28. Scaling back the research capacity of U.S. universities, including MIT, would slow scientific progress and have significant economic consequences. Not only would the global community lose ground toward cures, new technologies, and other innovation, but less research in the United States would also threaten to impede progress on American energy independence, security, scientific, technical, and economic priorities; result in fewer jobs and slower economic growth; cede to other nations American companies’ competitive advantage as a catalyst of new industries; and weaken long-term U.S. competitiveness against global adversaries, particularly as countries like China continue to boost their research funding and research infrastructure.

29. MIT cannot simply make up an increased gap in annual federal research funding by withdrawing monies from its institutional endowment. As noted above, MIT already matches sponsored research funding nearly dollar-for-dollar with research spending from its endowment, other charitable funds, and discretionary resources.

30. MIT’s endowment is principally made up of individual donations made for restricted, specific purposes and invested for lasting impact. MIT is legally required to use endowment returns consistent with the donors’ wishes and the purposes for which each endowment fund was established. Currently, approximately 80% of MIT’s endowment is subject to such restrictions. MIT cannot reallocate these funds to cover a loss of federal reimbursements for research costs. Moreover, MIT’s endowment is a resource intended to provide support for the Institute’s costs in perpetuity. The Institute cannot responsibly liquidate the endowment without jeopardizing that function, draining the Institute of resources needed to sustain cutting-edge research capacity for future generations.

31. In addition, MIT’s endowment supports approximately 50% of the total cost of undergraduate tuition: MIT’s financial aid to undergraduates totaled \$159 million last year, including

\$136 million to cover tuition and \$23 million toward students' living expenses. As a result of MIT's financial aid policies, last year, almost 40% of undergraduates attended MIT tuition-free and 87% of undergraduates graduated debt-free. Similarly, MIT funds 62% of the tuition for the roughly 7,000 graduate students at the Institute through fellowships, subsidies, and other resources. DOE's attempted reduction in F&A rate will make such financial aid levels more difficult to maintain in the long-term and lead to increased financial burden for students and families.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this day, April 13, 2025, at Cambridge, Massachusetts.

/s/ Ian A. Waitz

Ian A. Waitz